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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/914,701	08/31/2001	Jun Kawaguchi	M 6712 HST/NI PCT/US	1007

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EXAMINER
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OLTMANS, ANDREW L

ART UNIT	PAPER NUMBER
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1742

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DATE MAILED: 05/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/914,701

Applicant(s)

KAWAGUCHI ET AL.

Examiner

Andrew L Oltmans

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 6-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,6-10,12-17,19,20,22 and 23 is/are rejected.
- 7) ☒ Claim(s) 11,18 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

### *International Application WO 91/19836 A1*

2. Claims 1, 6, 8-10, 12, 14, 16-17, 20 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over International Application WO 91/19836 A1 (WO '836; cited on IDS filed March 5, 2003).

WO '836 teaches a zinc phosphating solution having the following composition, which overlaps the composition (i.e. phosphoric acid, nitric acid and dissolved zinc cations), including the compositional equations, recited in instant claims 1, 6, 12, 14 and 22-23 (page 4):

The appropriate ranges for the zinc ( $Zn^{+2}$ ) ions, phosphate ions ( $PO_4^{-3}$ ), and nitrate ions ( $NO_3^-$ ) in the electrolytic bath are, respectively, 3 to 20 g/L, 3 to 20 g/L, and  
15 3 to 40 g/L. In determining these concentrations, phos-

WO '836 also teaches a process of coating metal substrates wherein the process conditions overlap those recited in the instant claims, as recited in instant claims 8-10, 16-17 and 19-20 (page 6):

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Preferred process conditions include surface cleaning  
5 the workpiece, preferably by shot blasting, before electrolysis; the electrolytic bath being maintained at 20 to 90 ° C; an anode of carbon plate; an inter electrode distance in the range from 2 to 30 cm and more preferably from 3 to 10 cm; a current density in the range from 2 to 20  
10 amps per square decimeter (hereinafter "A/dm<sup>2</sup>") of workpiece surface, more preferably from 5 to 10 A/dm<sup>2</sup>. While the electrolysis time will vary with the current density, a strongly adherent, uniform, dense, and finely crystalline phosphate film with a preferred coating weight of from 3 to  
15 20 g/m<sup>2</sup> can normally be formed in 1 to 30 seconds, so that a time within this range is preferred.

WO '836 fails to meet all the limitations of the instant claims in that WO '836 does not explicitly teach the exact compositional and process condition ranges instantly claimed.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional ranges and the process conditions taught by the reference overlaps that of the instant claims, *In re Malagari*, 182 USPQ 549, and MPEP 2144.05.

***Kanamaru et al. 5,525,431***

3. Claims 1, 6-10, 12-17 and 19-20 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanamaru et al. 5,525,431 (Kanamaru).

Kanamaru teaches an electrolyte composition for electrolytically coating metal substrates wherein the electrolyte contains phosphoric acid, nitric acid and dissolved zinc cations in a concentration that overlaps the concentration, including the compositional equations, recited in instant claims 1-7, 12-15 (column 15):

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Such oxide film can be prepared, for example, by dipping zinc-base galvanized sheet steel in an aqueous solution containing 1-70 g/l of potassium permanganate, 5-60 g/l of phosphoric acid or boric acid (when the two acids are used together, respectively 5-60 g/l) and 100-800 g/l of zinc nitrate, by subjecting the galvanized sheet steel to a cathode electrolytic treatment in said aqueous solution, or by spraying the aqueous solution onto the galvanized sheet steel, whereby Mn oxide, phosphoric acid and Zn oxide are formed simultaneously.

[emphasis added by examiner]

and

An etching agent, for example, at least one of sulfuric acid, nitric acid, perchloric acid, etc. is preferably added to the above-mentioned aqueous solution in an amount of 1-10 g/l to improve the adhesive property, etc. of the film.

[emphasis added by examiner]

(see also column 18, lines 19-51)

Kanamaru also teaches a process of coating metal substrates wherein the process conditions overlap those recited in the instant claims, as recited in instant claims 8-10, 16-17 and 19-20 (column 18, line 25 and 50). Kanamaru teaches that the process includes contacting the liquid composition with a counter electrode and causing an electric current to flow through the metal substrate and into the volume of the liquid composition, as recited in instant claims 8, 16 and 19 (column 20, line 63 to column 23, line 3 and column 22, lines 28-35).

Kanamaru fails to meet all of the limitations of the instant claims in that Kanamaru fails to explicitly teach the exact compositional and process condition ranges instantly claimed.

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However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional ranges and the process conditions taught by the reference overlaps that of the instant claims, In re Malagari, 182 USPQ 549, and MPEP 2144.05.

***Allowable Subject Matter***

4. Claims 11, 18 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

a. A primary reason for the allowance of claims 11, 18 and 21, under the above conditions, is that the prior art fails to teach, either alone or in combination, the instantly claimed process, wherein the process contains the additional step of contacting the metal substrate with the claimed weakly basic aqueous colloidal solution prior to the contact with the claimed liquid composition.

***Response to Arguments***

5. Applicant's arguments filed March 5, 2003 have been fully considered but they are not persuasive. Claims 1 and 6-23 remain pending in this application. In view of applicant's arguments, the rejection under 35 USC 103 over Speckman has been withdrawn. However, the rejection under 35 USC 103 based upon Kanamaru has been maintained. Also, in view of WO '836 submitted in the IDS filed March 5, 2003, a new ground for rejection has been applied. Both Kanamaru and WO'836 have rejected the newly presented claims 22-23, as appropriate.

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6. With respect to the new ground for rejection, it is noted that the composition taught by WO '836 overlaps the composition instantly claimed. Likewise, the examiner maintains that the composition of Kanamaru overlaps the composition instantly claimed. For example, the calculation set forth by applicant on page 4 of the response explains that claim 14 requires a composition having greater than 0.2 mol/L phosphoric acid, greater than 0.2 mol/L nitric acid, wherein the resulting calculation corresponds to a Zn concentration of at least 0.144 mol/L (9.4 g/L). The examiner agrees with the calculation and notes that greater than 0.2 mol/L phosphoric acid corresponds to greater than about 19.6 g/L and 0.2 mol/L nitric acid corresponds to greater than about 12.6 g/L. In view of this calculation it can be seen that the composition of both WO '836 (see page 4, lines 12-15) and Kanamaru (column 15, lines 34-37) overlap the concentration of the instant claims, including the example set forth by applicant. It is noted that claim 14 is not the broadest concentration range of phosphoric acid, wherein claim 12 recites phosphoric acid in a concentration of at least 0.1 mol/L, corresponding to at least 9.8 g/L. Therefore, applicant's argument that Kanamaru does not overlap the concentration instantly claimed is not persuasive.

7. With respect to the argument that the Kanamaru reference requires an additional step to form a phosphate coating is not persuasive. The examiner maintains that all of the process steps including the contact with the composition (having an overlapping range) and the application of the electric current are taught by Kanamaru (column 18, line 25 and 50; column 20, line 63 to column 23, line 3 and column 22, lines 28-35). It is noted that the limitations that the applicant relies upon are in the preamble. The limitation has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the

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body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). It is noted that the *body* of the process claims do not mention a phosphate coating, or any properties indicating a phosphate film. Likewise, the sludge formation limitations only appear in the preamble. It is noted that even if the phosphate film and sludge properties are given patentable weight, one of ordinary skill in the art would expect that the taught composition, which is an overlapping composition of the claimed composition would expect that the interaction with the surface would be the same, including the interaction to form a phosphate coating without sludge formation, MPEP 2112.01. Applicant's citations of Kanamaru do not necessarily preclude a phosphate coating. In view all of the above, the arguments that the prior art fails to teach a phosphate coating is not found persuasive.

### ***Conclusion***

8. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on March 5, 2003 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after



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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L Oltmans whose telephone number is 703-308-2594. The examiner can normally be reached 8:30-5:00 Monday-Friday.

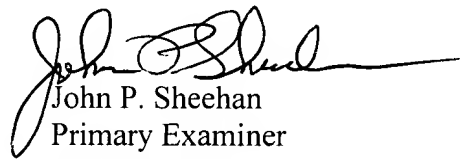
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 703-308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-873-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

*ALO*

ALO

May 12, 2003

  
John P. Sheehan  
Primary Examiner  
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